tions showed serous tumors of borderline malignancy with involvement of serosal surfaces. A total of 1,800 ml of dark greenish-brown fluid with some necrotic debris was drained from the cyst, and a frozen section study of the cyst wall was interpreted as benign columnar epithelium. Because of concern that the discolored fluid indicated a biliary tract communication, a Roux-en-Y cystojejunostomy was constructed for drainage.

Specimens of the cyst fluid and wall were negative for mycobacterial stains, amebic, fungal and echinococcal titers, parasites, bacteria, carcinoembryonic antigen and α-fetoprotein. The final pathologic diagnosis of the ovaries was grade I papillary serous adenocarcinoma. On permanent sections, the cyst wall (Figure 2) showed metastatic carcinoma of the same type. Peritoneal washings taken during the operation were also positive for adenocarcinoma.

She did well postoperatively and was treated with eight cycles of cisplatin, doxorubicin (Adriamycin) hydrochloride and cyclophosphamide. A second-look laparotomy was done one year after her first operation. There was no macroscopic evidence of disease in the pelvis or abdomen, but biopsies and washings from omentum, pelvis and paracolic gutters were positive for microscopic tumor. She was treated with a course of tamoxifen citrate and remains well six months following this surgical procedure.

Discussion

Cystic disease of the liver is classified as congenital or acquired. The congenital types are of parenchymal or ductal origin,[1] and the acquired types are usually infectious, posttraumatic or neoplastic.[2,3] The most common presentation is an abdominal mass; symptoms of pain and distention occur in a minority of patients. Diagnosis, once difficult preoperatively, now is best made by ultrasonography or computed tomography; these modalities also allow for guided aspiration of cyst contents in properly selected cases. Characterization of the fluid as clear, serosanguineous, bilious or purulent is important preoperative information and may assist the surgeon in planning the operative strategy.[4] The preferred surgical treatment is excision of the cyst if feasible. Cysts that because of size or location cannot be excised completely should be unroofed and allowed to drain into the peritoneal cavity in the absence of biliary tract communication. Those that contain bile should be drained via a Roux-en-Y cystojejunostomy.

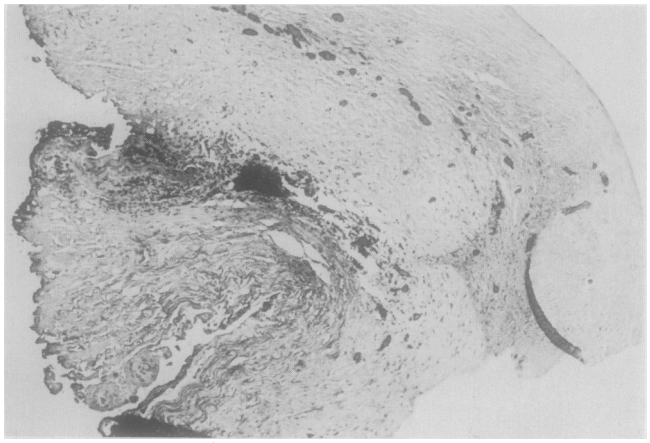

Figure 2.—Microscopic section of the liver cyst wall shows a fibrous structure with a fragmented lining and minute papillary projections (original magnification × 50; hematoxylin and eosin stain).

Fewer than 1% of nonparasitic cysts are neoplastic.[2] These are usually hamartomas, cystic hepatomas or cystadenocarcinomas. The intraoperative diagnosis of the last type by frozen section may be inaccurate, and Wellwood and associates[3] have suggested that the diagnosis of malignancy is best made at an operation based on macroscopic features of the cyst, such as an irregular papillary lining.

Metastatic spread from ovarian carcinoma is usually to the diaphragm, para-aortic nodes, omentum and peritoneal spaces.[5] Liver involvement is generally a late finding. Even tumors of so-called borderline malignancy may spread transperitoneally, but, again, the liver is a rare target.

Our patient presented with cystic liver metastasis from a well-differentiated papillary serous adenocarcinoma of the ovary. A search of the literature has not yielded a previous report. An alternative hypothesis that the findings might have represented metastatic spread to a congenital cyst is untenable since the cyst was not present at the earlier cholecystectomy. It would seem prudent to scan the lower abdomen and pelvis during CT or ultrasound evaluation of a cystic liver mass in a woman susceptible to ovarian neoplasia.

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Lymphangitic Cutaneous Metastases From Lung Cancer Mimicking Cellulitis

Carcinoma Erysipeloides

HOWARD J. HOMLER, MD
C. STEPHEN GOETZ, MD
DENNIS D. WEISENBURGER, MD
Sacramento, California

CUTANEOUS METASTASES from solid internal cancers usually present as nodular tumors.[1] We recently saw a patient with adenocarcinoma of the lung in whom an unusual cutaneous tumor infiltrate developed that clinically mimicked a cellulitis.

Report of a Case

The patient, a 45-year-old man, presented in March of 1983 with dyspnea, weight loss and back pain. He was a heavy cigarette smoker. On physical examination he had de-

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From the Departments of Internal Medicine (Dr Homler), Dermatology (Dr Goetz) and Pathology (Dr Weisenburger), University of California, Davis, Medical Center, Sacramento.

Reprint requests to Howard J. Homler, MD, 6401 Coyle Ave, Suite 212, Carmichael, CA 95608.

creased breath sounds and dullness to percussion over the left lung. A chest x-ray film showed a left-sided pleural effusion and a bone scan showed vertebral and left femoral metastases. Cytologic examination of the pleural effusion showed malignant cells of uncertain origin. Results of a bronchoscopic examination were negative. A needle biopsy of the pleura also showed unclassifiable malignant cells. A thoracotomy was done and showed widespread involvement of the pericardium, pleura and peripheral lung parenchyma by tumor. Mucicarmine stains showed cytoplasmic mucin in the neoplastic cells, and the tumor was classified as a poorly differentiated adenocarcinoma of the lung. Tetracycline pleurodesis was done and palliative radiotherapy was given to the vertebral and femoral metastases. The patient refused chemotherapy.

In early May of 1983, an asymptomatic, faintly erythematous, poorly marginated rash developed in the area of the thoracotomy scar. By mid-June, the rash measured 15 by 22 cm and was more deeply erythematous and marginated, with induration and warmth (Figure 1). The patient was febrile and had mild pruritus. The erythema expanded despite a course of ampicillin.

The patient was admitted for treatment of severe diarrhea and fever. His leukocyte count was 9,200 per μl, with an increased number of neutrophils. The erythema had further increased in size but was not crepitant. A needle aspiration specimen of the leading edge of the rash showed no microorganisms on a Gram's stain. A pleural fluid culture was sterile and a stool culture showed no pathogens. Multiple blood cultures grew *Clostridium perfringens*. The fever responded to penicillin given intravenously, but the rash continued to expand rapidly. A skin biopsy showed infiltration of the dermal lymphatics by malignant cells (Figure 2). The patient died shortly thereafter and an autopsy was not done.

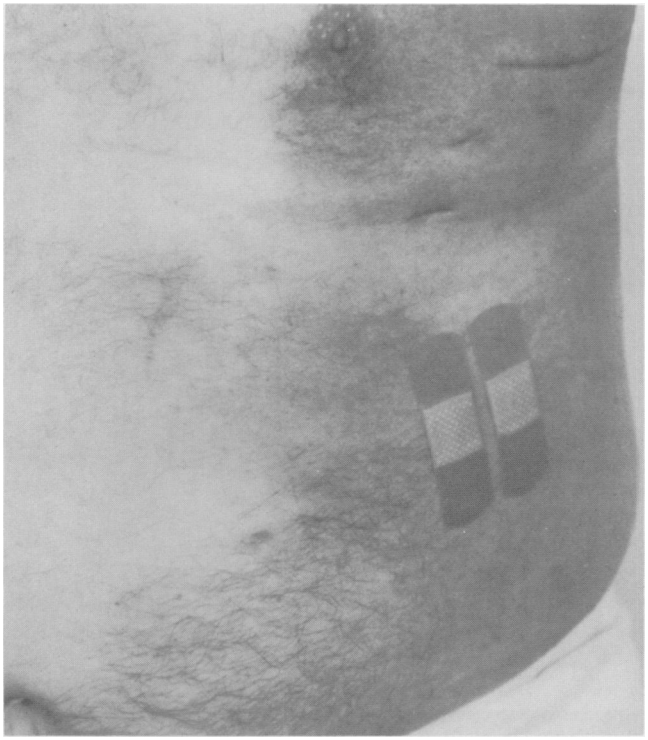

Figure 1.—A thickened, erythematous rash appeared over the lateral thorax, extending from a thoracotomy scar.

Comment

Cutaneous metastases occur in 3% to 5% of patients with internal malignant lesions.[1] Cutaneous lesions may be the first indication of recurrence in a patient with a known primary tumor or they may be the presenting lesion of an unsuspected malignant disorder. Typical skin metastases are firm dermal nodules, which vary from flesh-colored to purple. Easily palpable, they are usually firm and rarely ulcerate. In contrast, the inflammatory type of cutaneous metastasis seen in this patient has been referred to as carcinoma erysipeloides because of its similarity to erysipelas. Carcinoma erysipeloides is most commonly associated with breast carcinoma but has been reported with lung cancer.[2,3]

Hazelrigg and Rudolph have described a case that is strikingly similar.[2] Their patient had adenocarcinoma of the lung with a malignant pleural effusion. Several invasive procedures were done. Two months later, an erythematous plaque developed near the thoracotomy scar and was initially treated as a cellulitis until a skin biopsy showed metastatic carcinoma.

Cutaneous spread of the tumor in our patient was directly along lymphatic channels and may have been facilitated by thoracotomy, thoracentesis and chest tube placement, all of which may have disrupted natural barriers to the spread of the tumor. The spread of malignant cells along such scars has been reported in patients with mesothelioma.[4] Adenocarcinomas are the most frequent cancers to metastasize to the skin,[1] and it is noteworthy that the patient of Hazelrigg and Rudolph and our patient had adenocarcinomas.[2] Ingram does not give the histologic type of tumor in his reported case.[3] The prognosis of patients with carcinoma erysipeloides is poor, although radiation therapy may be of benefit.[5]

It is important to differentiate carcinoma erysipeloides from erysipelas. The latter is an acute cellulitis caused by group A β-hemolytic streptococci. Skin affected by erysipelas is usually warmer and more tender than the plaques of carcinoma erysipeloides, although both conditions can cause pitting edema. Neutrophilia and fever are more commonly seen with erysipelas. *C perfringens* can cause a rapidly pro-

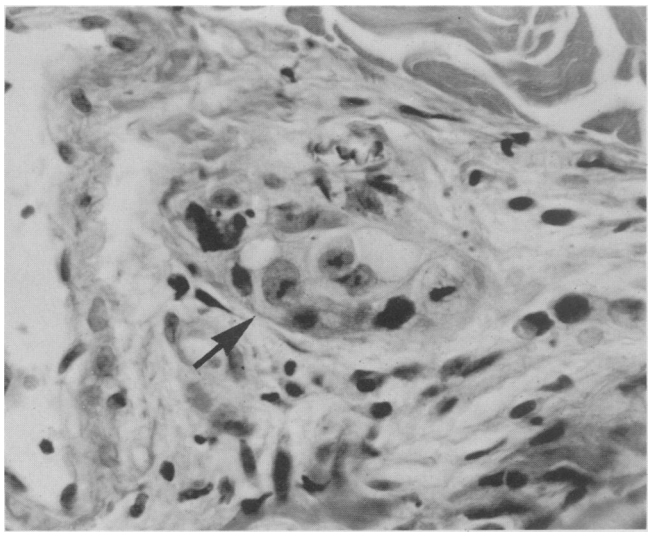

Figure 2.—Malignant cells infiltrate the dermal lymphatics **(arrow).** There is no evidence of cellulitis (hematoxylin and eosin, magnification × 425).

gressive necrotizing infection of the skin and muscle. Such infections are often accompanied by the formation of bullae, systemic toxicity and a fatal outcome. Both infections respond to penicillin, although clostridial infections also may require surgical debridement. In our case, the rash did not respond to antibiotic therapy, was nontender and had no associated bullae. *Clostridia* was isolated from blood but not from the skin, and biopsy specimens showed no evidence of cellulitis. Our patient showed an unusual cutaneous manifestation of lung cancer, and this case emphasizes the importance of alerting a pathologist to the suspected diagnosis of carcinoma erysipeloides so that the dermal lymphatics are examined at multiple levels.

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Medical Practice Question

EDITOR'S NOTE: *From time to time medical practice questions from organizations with a legitimate interest in the information are referred to the Scientific Board by the Quality Care Review Commission of the California Medical Association. The opinions offered are based on training, experience and literature reviewed by specialists. These opinions are, however, informational only and should not be interpreted as directives, instructions or policy statements.*

Assistant Surgeon at Elective Abdominal Tubal Ligation

QUESTION:

Is it considered accepted medical practice that an assistant surgeon be present during an elective abdominal tubal ligation?

OPINION:

In the opinion of the Scientific Advisory Panel on Obstetrics and Gynecology, it is considered accepted medical practice to have an assistant surgeon present during an elective abdominal tubal ligation when the sterilization procedure is done by standard laparotomy.

In most cases, when tubal ligation is accomplished by laparoscopic methods, an assistant surgeon is not routinely needed, although an assistant of some kind, such as an operating room nurse or surgical technician, is usually necessary.

The presence of an assistant surgeon during an elective abdominal tubal ligation should be at the discretion of the principal surgeon.